



3V4 **Description and Rating** **PENTODE**

The 3V4 is a miniature power-amplifier pentode designed for use in the power output stage of compact, battery-operated equipment. It is particularly useful in three-way portable receivers which employ 90-volt batteries. The filament is center-tapped to permit operation from either a 2.8-volt or 1.4-volt filament supply voltage.

GENERAL

Cathode - Coated Filament

	Series*	Parallel*	
Filament Voltage, D-C	2.8	1.4	Volts
Filament Current	0.05	0.1	Ampere

Envelope - T-5½, Glass

Base - E7-1, Miniature Button 7-Pin

Mounting Position - Any

Direct Interelectrode Capacitances +

Grid-Number 1 to Plate	0.2	μμf
Input	5.5	μμf
Output	3.8	μμf

MAXIMUM RATINGS

DESIGN-CENTER VALUES

	Series Filament*	Parallel Filament*	
Plate Voltage	90	90	Volts
Screen Voltage	90	90	Volts
D-C Cathode Current	6.0 §	12	Milliamperes

CHARACTERISTICS AND TYPICAL OPERATION

CLASS A₁ AMPLIFIER

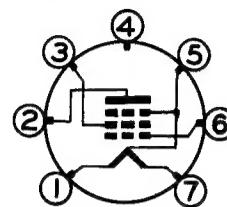
	Series Filament*	Parallel Filament*	
Plate Voltage	90	85	90 Volts
Screen Voltage	90	85	90 Volts
Grid-Number 1 Voltage	-4.5	-5	-4.5 Volts
Peak AF Grid-Number 1 Voltage	4.5	5	4.5 Volts
Plate Resistance, approximate	0.12	0.12	0.1 Megohm
Transconductance	2000	1975	2150 Micromhos
Zero-Signal Plate Current	7.7	6.9	9.5 Milliamperes
Zero-Signal Screen Current	1.7	1.5	2.1 Milliamperes
Load Resistance	10000	10000	10000 Ohms
Total Harmonic Distortion, approximate	7	10	7 Percent
Maximum-Signal Power Output	0.24	0.25	0.27 Watt

* For series-filament operation the positive filament voltage is connected to pin 7, and the negative filament voltage is connected to pin 1. For parallel-filament operation the positive filament voltage is connected to pins 1 and 7 tied together, and the negative filament voltage is connected to pin 5. In each case, all voltages are referred to the negative terminal of the filament.

§ Value is for each filament section. With series-filament operation, a resistor must be connected across the negative filament section to bypass any cathode current in excess of the rated maximum. When other tubes in a series-filament arrangement contribute to the filament current of the 3V4, an additional shunting resistor may be required across the entire filament.

+ Without external shield.

BASING DIAGRAM

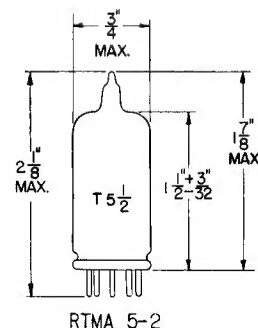


RTMA 68X
BOTTOM VIEW

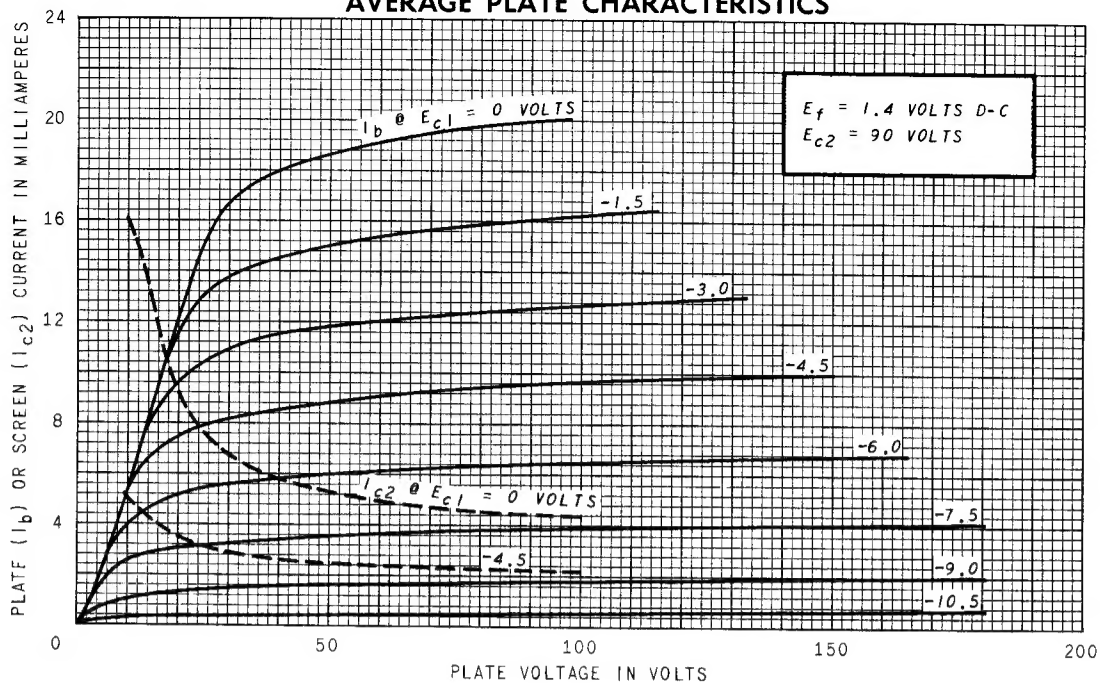
TERMINAL CONNECTIONS

- Pin 1 - Filament
- Pin 2 - Plate
- Pin 3 - Grid Number 2 (Screen)
- Pin 4 - No Connection
- Pin 5 - Filament Center-Tap and Grid Number 3
- Pin 6 - Grid Number 1
- Pin 7 - Filament

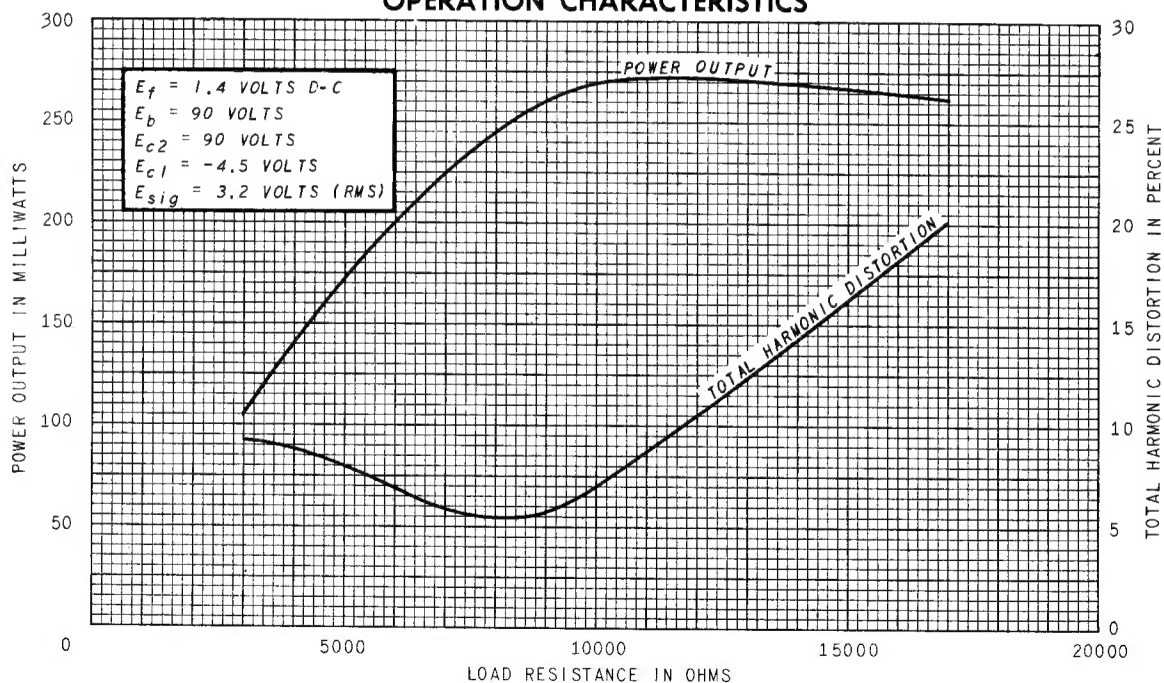
PHYSICAL DIMENSIONS



AVERAGE PLATE CHARACTERISTICS



OPERATION CHARACTERISTICS



TUBE DEPARTMENT

GENERAL ELECTRIC

Schenectady 5, N. Y.